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REPORT ON THE SAFETY OF AIRCRAFT UNDER CHARTER TO THE DEPARTMENT OF DEFENSE

REPORT

OF THE

INVESTIGATIONS SUBCOMMITTEE

OF THE

COMMITTEE ON ARMED SERVICES

HOUSE OF REPRESENTATIVES

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LETTER OF TRANSMITTAL

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
Washington, DC, July 17, 1986.

Hon. LES ASPIN,
Chairman, Committee on Armed Services,
House of Representatives, Washington, DC.

DEAR MR. CHAIRMAN: Attached is a report of the Investigations Subcommittee entitled "Safety of Aircraft Under Charter to the Department of Defense". The report was approved without objection by the subcommittee members. The report is based on hearings held by the Investigations Subcommittee on February 5 and 6, March 6, and June 26, 1986.

I shall appreciate your early approval of the report so that it may be printed.

Sincerely,

BILL NICHOLS,
Chairman.

Enclosure.

INTRODUCTION

In the early morning hours of December 12, 1985, an Arrow Air DC–8 accelerated down the runway at the international airport in Gander, Newfoundland. This aircraft, carrying 248 military personnel from the 3rd Battalion, 502nd Infantry, 101st Airborne Division, was continuing on a journey which had originated in the Sinai Peninsula. After a refueling stop in Cologne, West Germany the aircraft crossed the Atlantic to Gander. Its destination was the parent command at Fort Campbell, Kentucky. The soldiers were returning home to their families and friends for Christmas after serving a six-month tour of duty with the Multinational Force and Observers (MFO), a 10-nation United Nations contingent responsible for keeping peace since Israel withdrew its forces from the Sinai Peninsula in 1982.

Shortly after takeoff at 5:15 a.m., having just passed the boundary of the airport, the DC–8 apparently veered right and crashed in flames, strewing wreckage over a several square-mile area. All 256 people aboard perished.

This crash concluded a year which was the worst for fatalities in world civil aviation history. While this particular aircraft was not, at the time, under charter to the Department of Defense (DOD), Arrow Air had a charter contract with the department. This aircraft had been used in the past for military charters.

After a staff preliminary inquiry, the subcommittee held a series of hearings on February 5 and 6, March 6, and again on June 26, 1986. These hearings focused on the policies and procedures of the Department of Defense in chartering aircraft for the movement of military personnel, airline companies under contract to the department, and the methods employed for ensuring the safety of chartered aircraft. The subcommittee heard from a wide variety of witnesses from the Department of Defense, the Federal Aviation Administration (FAA), the General Accounting Office, current and former airline employees, airline association representatives, and individuals with expertise in aviation safety. As a result of those hearings, the subcommittee made the following findings, conclusions, and recommendations.

FINDINGS AND CONCLUSIONS

1. In 1959 the Congress directed that the DOD use the civilian airlines for the transportation of military personnel. As a result of that directive and because of cost considerations and lack of appropriate organic airlift, the Department of Defense must rely on the civil aviation industry in peacetime and, more importantly, commitment of aircraft to the Civil Reserve Air Fleet (CRAF) for the airlift of personnel in a national emergency.

2. Responsibility for safety of civil aviation operations clearly rests with the FAA; nevertheless, DOD must assume a greater role in ensuring the safety of aircraft carrying military personnel.

3. Airline deregulation has doubled the number of civil airline companies since 1978. In the same time the FAA's ability to conduct inspection and monitor the safety of these airlines has diminished greatly.

4. The combination of two factors—one, many airlines operating on minimum FAA standards, and two, the reduction of FAA's workforce—has created a situation in which no one can assure the public with any degree of confidence that the airlines they are flying are truly safe.

5. A nationwide FAA inspection conducted in 1984 revealed that airlines with military contracts had almost twice as many of the most serious deficiencies as did similar airlines without military contracts. Of the 21 airlines (FAA part 121) with military contracts, 19 (or 90 percent) had the most serious deficiency ratings.

6. Department of Transportation Order 8000.4E establishes coordination procedures for FAA with the Military Airlift Command (MAC) with regard to the sharing of safety-related information. This regulation, however, has been ignored over the years. Little, if any, information flows between these two agencies relating to the safety of the airline industry. The Arrow aircraft which crashed in Gander had been involved in several incidents which may have related to the safety of this aircraft. None of these incidents, however, were ever reported to the FAA or to DOD, which may indicate major communication problems in the industry.

7. There is also a lack of coordination between MAC and the Military Traffic Management Command (MTMC), the two DOD organizations which contract for airlift. In some instances MTMC suspended a carrier while MAC continued business as usual and, further, was unaware of the suspension action by MTMC.

8. DOD has no administrative organization established to make recommendations to the Secretary of Defense on the suspension and reinstatement of air carriers and to oversee the policies, procedures, and general safety of airlines which do business with the department. Even though Arrow Air was involved in the Gander crash and was under investigation by FAA, a contract extension was granted by DOD without consideration of these investigations.

RECOMMENDATIONS

1. DOD should continue its use of civil air carriers for the movement of military personnel in return for the commitment of these carriers to the CRAF which will augment personnel and cargo movement in time of national emergency.

2. DOD should assume a greater role in the safety oversight of aircraft under charter.

3. DOD should establish guidelines for suspension and reinstatement of air carriers involved in a fatal or serious accident, and violations of rules and regulations of the FAA.

4. DOD should establish a specified period of prior commercial passenger service as a prerequisite to contracting with air carriers

for the airlift of military personnel and should perform a safety evaluation of the air carrier prior to any contracting action.

5. DOD should conduct periodic inspections of each air carrier that contracts with the DOD for charter air transportation of members of the armed forces. These inspections should include, at a minimum, an on-site capability survey at least every two years, a performance evaluation of the carrier every six months, unannounced ramp inspections and operational check-rides on a periodic basis.

6. The Secretary of Defense should request the Secretary of Transportation to provide all reports of inspections performed by FAA personnel, and the status of corrective actions on each aircraft of an air carrier under contract to DOD.

History of the Use of Charter Aircraft

Today, 95 percent of personnel movements and 30 percent of cargo service of the Department of Defense move by charter contracts. In return for the military charter of commercial aircraft in peacetime, the airline companies have agreed to dedicate aircraft to the Civil Reserve Air Fleet (CRAF) in time of national crisis. Today, 24 companies have committed a total of 346 long-range aircraft to the CRAF program. Of these 24 companies, 17 have charter contracts.

The CRAF was established in 1952 under a Memorandum of Understanding between the Department of Defense (DOD) and the Department of Commerce (this function later was transferred to the Department of Transportation). During a time of national crisis, the CRAF fleet would provide 95 percent of the military's passenger airlift and 25 percent of its cargo movement requirements. This relationship between the department and civilian industry was encouraged by Congress and illustrates the desire to expand the mobilization base and reduce airlift shortfalls by concentrating the award of DOD peacetime airlift business to those carriers who are willing to commit aircraft to the CRAF.

If the government had to acquire, operate, maintain, and staff passenger airlift capability equivalent to the commercial fleet which today provides this service, the cost would be in the billions of dollars. The DOD estimates that replication of domestic and international full-plane passenger charter operations would involve the procurement of approximately 20 commercial-type passenger aircaft. The estimated cost for this procurement, initial crew qualifications, and annual operations and support costs is about $2 billion. Military personnel requirements for air crews and support personnel would also increase proportionately. These costs relate only to peacetime charter airlift and do not include the costs of substituting organic airlift to meet the needs of millions of DOD passengers using regularly scheduled airline service.

According to testimony by DOD witnesses:

> In 1959, the House Committee on Government Operations issued a report concerning military air transportation. One of 22 recommendations was that the DOD should concentrate on moving military unique cargo, leaving to the civil air carriers the primary responsibility for the

transportation of passengers and more conventional kinds of military cargo. This policy has been reinforced periodically by the Congress. Consequently, the military fleet now consists mostly of cargo aircraft used for transporting high priority materiel in support of our forces and for military training necessary for preparedness.

Therefore, the bases for the Department of Defense use of charter passenger aircraft are: First, Congressional direction to use military cargo aircraft for moving military unique cargo, leaving to the civilian air carriers the primary responsibility for transportation of passengers and more conventional kinds of cargo. Second, channeling as much DOD passenger volume to the civilian industry, where the preponderant capability is related to passenger movement, has allowed the DOD to use its organic airlift to concentrate on cargo movement.

Last, based on the above, organic airlift capability has been designed to efficiently handle cargo. These aircraft are ill-suited to move passengers under normal circumstances and passenger amenities are minimal.

DOD Use of Commercial Charter Aircraft

The DOD in fiscal year 1985 accounted for 5.4 million passengers traveling via commercial air on official business. These range from full plane charter airlift of military personnel and their families, or military forces on exercises and unit rotations, to individuals moving on official orders or on leave. Of that total, approximately 4.5 million flew on regularly scheduled domestic and international flights. The remainder flew on commercial aircraft under DOD charter.

Last year over 2,000 charters were used on overseas routes, transporting approximately 700,000 people, while another 1,000 charters were used to transport 177,000 personnel within the continental United States.

Over 40 commercial carriers participate in the DOD charter passenger business. The DOD is limited to charter U.S. carriers certified by the Federal Aviation Administration (FAA) to operate under part 121 (air carrier) and part 135 (air taxi) of the Federal Aviation Regulations. Part 121 carriers include those aircraft which transport 30 or more passengers and have a payload greater than 7,500 pounds. Part 135 air taxis provide service to less than 30 passengers and have a payload of less than 7,500 pounds.

Both types of airline companies contract with DOD through the Air Force Military Airlift Command (MAC) or the Army Military Traffic Management Command (MTMC).

Military Airlift Command

The peacetime mission of the MAC is to maintain an airlift system which is trained to conduct the wartime mission. This includes the strategic deployment of combat forces and their equipment to the battle area, the airlift required to employ those forces, and the resupply of those forces while engaged in combat.

To maintain readiness to conduct strategic deployment, MAC operates an international route system which exercises the worldwide airlift system and keeps it trained and ready to prosecute the wartime mission. Unlike other military organizations, the training of MAC air crews and support forces associated with transport aircraft produce a by-product—airlift. This airlift is available to support Department of Defense transportation needs throughout the world. As the DOD single manager operating agency for airlift, MAC has the responsibility to satisfy DOD's air transportation requirements. The MAC witness testified that dual use of this resource for both MAC readiness training and DOD transportation saves the taxpayer in excess of one billion dollars each year.

Testimony, however, established that because the peacetime requirements for cargo and passenger transportation exceeds peacetime organic lift capability, commercial contract airlift is needed to overcome this shortfall, and also provide suitable aircraft for passenger movement.

These carriers are committed to MAC through long-term contracts to meet all international and domestic requirements which exceed 90 days. Last year MAC contracted with 24 carriers for over $424.2 million of international commercial capability, of which approximately $307 million was for passenger transportation.

MAC uses a negotiated procurement process with the CRAF participating carriers who are approved part 121 operators. These operators are certified by the FAA and confirmed by the MAC Capability Survey Office. The contracts are awarded annually based on CRAF participation, carrier surveys, and by reviewing past performance. Day-to-day surveillance is performed through ramp inspections. These are walk-around inspections performed by Air Force maintenance technicians to detect defects in the aircraft that can be observed through a visual check.

The DOD relies primarily on FAA inspections. These are the same inspections which are conducted on all civil passenger aircraft. In addition, MAC conducts a preliminary survey when initially contracting for international passenger service and then, generally, every other year conducts a capabilities survey. Those surveys essentially verify that FAA has, in fact, inspected the airline, that it has the proper equipment, safety, and training programs and is in compliance with FAA regulations. A rigid MAC requirement specifies that no contract carrier may receive in excess of 40 percent of its total revenue from the Defense Department. This, therefore, means that airlines which do business with DOD must derive the majority of their revenues from the civilian sector. Last year Arrow had 8 percent of the total MAC charter business, or about $32 million of the total $430 million both for passenger and cargo traffic.

Military Traffic Management Command

The MTMC mission includes the responsibility to negotiate rates with commercial carriers for the movement of military and civilian passengers within the Continental United States (CONUS). This includes movement of groups of 21 or more passengers within CONUS. Carriers do not have to be participants in CRAF in order

to contract with MTMC, but MTMC does operate the War Air Service Program (WASP) which mobilizes aircraft for domestic service. MTMC relies heavily on MAC to perform airlift capabilities surveys in order to determine whether a carrier can in fact support DOD passenger movement requirements in a safe and reliable manner.

There are 67 airlines currently approved to do business with MTMC. All awards of movements to carriers are based on competitive bidding with the award provided the lowest bidder who can satisfactorily and safely accomplish the move.

In fiscal year 1985 MTMC arranged 1,089 charter air moves with 44 different carriers involving over 177,000 passengers at a cost of $31.7 million.

As a result of this free enterprise contracting system, most U.S. military aircraft have been designed for tactical missions, combat, training or carrying heavy cargo. Meanwhile, the DOD has become the largest single customer of civilian airlines; e.g., in 1985 DOD paid $1.15 billion for airlift services, about 3 percent of the total revenue earned by American carriers.

It is difficult to compare safety records of civilian and military aircraft pertaining to passenger airlift due to differences in aircraft design and utilization. Military aircraft normally are used in a much more demanding environment than commercial aircraft. Commercial aircraft chartered for passenger operations experienced two crashes resulting in 294 fatalities between 1968 and 1985. During the same period, excluding tactical support missions, 15 military crashes involving 372 DOD passenger fatalities have been identified.

In another attempt to draw a comparison of military and civil flight safety, DOD contrasted accidents of similar MAC aircraft and commercial scheduled airline accidents for three years. The results are shown in the following chart.

Carrier	1983		1984		1985	
	Accidents	Rate [1]	Accidents	Rate [1]	Accidents	Rate [1]
Scheduled airlines	23	0.34	14	0.19	18	0.23
MAC	2	.43	1	.21	1	.20

[1] Per 100,000 flight-hours.

The DOD analysis of these statistics failed to reveal any identifiable trends. The statistics alone, however, reveal civil air carrier accident rates per 100,000 flight hours are generally lower than DOD rates.

Problems With the FAA

Commercial air carriers are required by the Federal Aviation Act to have both economic and safety certificates from the Department of Transportation. FAA certifies carriers which meet requirements for flight operations, maintenance, training and safety in accordance with Federal Aviation regulations. Military aircraft, except for certain DOD aircraft such as the C-9, T-43, C-12, and C-21, which are essentially off-the-shelf commercial aircraft, do not

have to maintain air-worthiness certification from FAA. Also, DOD maintenance requirements may not conform to FAA requirements.

Testimony before the subcommittee reflected that the number of U.S. scheduled airlines more than doubled from 1978 when 240 carriers operated about 3,000 aircraft, to 1984 when some 500 carriers had about 4,200 aircraft. At the same time the ability of FAA to conduct inspections has been reduced. In 1979 FAA had 2,100 inspectors responsible for monitoring the operation of commercial airlines. By 1984 the number had decreased to a little more than 1,300.

The General Accounting Office (GAO) in an assessment of FAA said FAA had taken few steps to monitor and deal with the impact of these increases on its inspection workload and staffing requirements. FAA did not collect data on what inspections were or were not being performed or what the inspections showed. It lacked standards for how to perform the various kinds of inspections and how long these inspections should take. FAA did not provide adequate guidance to its field managers. Indeed, GAO said one FAA study showed that its airline inspection and follow-up activities are often insufficient to identify major safety problems or to ensure that problems are corrected once they are identified.

The GAO also reported in a related investigation that FAA's own data revealed:

—Some air carriers with a similar number of operating hours had significant differences in the total number of FAA inspections, and

—Some air carriers with similar numbers of FAA inspections had large differences in total operating hours.

While it is difficult to place the blame completely on the problems associated with airline deregulation, witnesses testified that competition has changed the air transportation system. For example, competition had forced airlines to skimp on maintenance, maintenance training, pilot training, pilot qualifications, and to defer maintenance, all of which impinge on safety.

Another witness said:

> The FAA of today is not only unable to assure or insure the fitness of commercial charter aircraft used for the movement of our military personnel, it is singularly inadequate to the task of insuring the fitness of any aspect of the U.S. airline system for use by any American, whether he be in uniform or otherwise.
>
> The reasons for this are beyond the control of the good, dedicated people of the FAA. They go beyond the inherent, traditional internal problems such as the political infighting, calcified bureaucratic structure, and contradictory charter of the FAA to promote as well as regulate.
>
> The principal reasons for the FAA's inability to be an effective controlling factor in the task of maintaining air safety stems from the essentially impossible demands made of them by the Airline Deregulation Act of 1978.
>
> In a nutshell, airline safety has become a cost-accountable item in an airline system which now lives by an inescapable credo: cut costs to the bone wherever possible.

> Our national experiment, that is really what it is, with economic deregulation of this industry has done far more than force efficiency born of competition on the formerly secure, protected carriers; it has also forced a substantial change in the way the airline industry answers the crucial question, how much safety is enough? Because that is the crux of the matter.

The Federal Air Regulation provides a minimum acceptable standard below which no airline could go without triggering FAA intervention. The subcommittee heard testimony that for some airlines the bare minimum, indeed less than the minimum, is the standard. The contrast between a carrier that has to maintain an aged fleet of DC-8s in the rain on a ramp because they do not have access to a hangar, and a major airline with millions of dollars invested in maintenance and overhaul facilities staffed by trained personnel is stark. Both are legal, both comply with the same minimums, yet there is a tremendous difference in the safety offered the flying public.

Airlines, operating on minimums, coupled with the reduction in the FAA inspector work force, have created a situation which is out of control as far as aircraft inspections and safety is concerned. One witness testified that some inspectors have been assigned as many as 30 airlines to supervise simultaneously. Those inspectors cannot even process the paperwork for such a workload, let alone have time to examine what is really going on in the ranks of that company.

A former airline pilot told the subcommittee that the FAA is neither able to handle the task of assuring, by inspection, the safety of civilian aircraft used in military charter flights nor can FAA adequately assure that such charter carriers meet the spirit and intent, as well as the basic letter of the regulations. The lack of trained personnel, the extensive geographical demands, the internal inability to go beyond mere checking of paperwork records create an extremely poor situation for the safety of the airline industry as a whole.

National Air Transportation Inspection (NATI)

Out of this concern for air safety, the Secretary of Transportation, in February 1984, directed FAA to conduct an unprecedented nationwide inspection of the safety of the air transportation industry. This inspection, known as the NATI, evaluated airlines operating under FAA Regulation part 121 and commuter airlines operating under part 135. During this inspection, FAA estimated it performed as many inspections as it did in the course of a full year's routine inspection activity.

The NATI was conducted in two phases—Phase I inspected 327 airlines, including 141 part 121 airlines for a total of 13,467 inspections altogether. Phase I results were used to assess the compliance level of the airline industry and to select airlines requiring further investigation for the more in-depth Phase II inspections. In Phase II 40 airlines were given a closer scrutiny. A total of 27 part 121 airlines were selected, including 9 (43 percent) with MAC contracts.

In testimony before the subcommittee, GAO provided the result of a review of the NATI report. The GAO confined their review to part 121 carriers with MAC contracts. This review showed that airlines with military contracts had almost twice as many of the most serious deficiencies as did similar airlines without military contracts. According to FAA, these deficiencies adversely affected flight or contained high potential for unsafe conditions. Of the 21 airlines with military contracts, 19 (or 90 percent) had the most serious deficiencies at rates higher than the median for all airlines (see chart).

RANKING OF MAC CONTRACT AIRLINES WITH SEVERITY LEVEL 3 ADVERSE COMMENTS ABOVE THE 11.8 MEDIAN FOR ALL AIRLINES

Airline	Number of severity level 3 adverse comments per 100 inspections	Ranking among all airlines in rate of severity level 3 comments
Rich International	119.2	4
United Air Carriers	83.3	6
Arrow Airways	69.9	9
South Pacific Island Airways	63.2	10
Jet Charter	45.0	13
Pan American	43.5	14
Capitol International Airways	35.1	24
Key Airlines	30.8	28
Flying Tiger Line	26.3	34
Transamerica Airlines	25.8	36
World Airways	23.5	38
Air Resorts	22.2	42
Eastern Airlines	21.4	45
Hawaiian Airlines	19.4	53
American Trans Air	17.1	57
Evergreen International	16.5	58
Reeve Aleutian Airways	14.3	60
United Airlines	13.5	63
Airlift International	12.5	67

Source: FAA, *Memorandum on Evaluation of National Air Transportation Inspection Program Inspection Reports*, April 1985.

This is based on FAA's own task force's classification of adverse comments at severity levels 1, 2, or 3, with severity level 3 representing situations having the highest potential for unsafe flight conditions.

The GAO concluded even though they could not comment on the reasons for the adverse comments, that as a group, airlines with military contracts warrant increased inspection and surveillance. Specifically, GAO found that FAA identified a higher percentage of MAC contract airlines for more in-depth Phase II NATI inspections, MAC contract airlines had a higher rate of severity level 3 comments than airlines without MAC contracts, and MAC contract airlines had a higher percentage of unsatisfactory inspections than other airlines. For example, GAO's March 1986 report on FAA's surveillance of two contract military airlines showed that FAA in-

spectors repeatedly uncovered violations of federal safety regulations that remained uncorrected long after FAA's initial findings of deficiency. More recently National Transportation Safety Board investigations criticized FAA's inspection program and concluded that ineffective FAA inspections contribute to aircraft accidents.

The GAO witness testified that nationwide minimum standards for the type and frequency of airline inspections should be established. He said FAA's current standards do not accomplish this.

The 1984 NATI found that airlines having safety deficiencies usually had one or more of the following characteristics:

—A relatively large amount of contract maintenance and/or training;
—Inadequate internal audit procedures;
—A major change in operating scope, such as significant route expansion, fleet expansion, or introduction of a new type of aircraft;
—Financial, labor/management, or other corporate problems; and
—Management skills and philosophy incompatible with sound safety practices.

Department of Transportation (DOT) Order 8000.4E

Department of Transportation Order 8000.4E establishes coordination procedures for FAA with the MAC in their evaluations of air carriers certificated by the FAA who have contracts with MAC. This document ensures cooperation between FAA and the MAC Capabilities Survey teams, so that the team is made aware of regulatory requirements, equipment limitation, and air carrier manual provisions. The FAA regional representative is required to "maintain close liaison with district office working with the MAC inspection team." The order says, ". . . the MAC surveillance program includes periodic no-notice ramp inspections and short informal inspection visits to the carrier. Normally the local FAA district office will not be notified of these inspections unless a potential problem area of concern is revealed.

> Since MAC cannot maintain frequent contact with all carriers, the district office having certificate responsibility will notify the Contract Airlift Survey Office (MAC/LCI), whenever a potential problem area is discovered, particularly involving safety. MAC/LCI will, in turn, continue working closely with the FAA district offices to resolve any problem area. Carriers performing airlift services for the Department of Defense are aware that the commander of MAC may suspend service for compromising safety.

Testimony before the subcommittee from both FAA and DOD witnesses indicated that this regulation has been ignored over the years. A former pilot who flew both military and civilian aircraft testified he was surprised that there was a regulation or agreement between FAA and MAC for exchange of information.

In fact, the Arrow Air aircraft which crashed in Gander had been involved in several previous unreported incidents which may have indicated early signs of safety problems. On July 28, 1985 the

commander of an Ohio Air National Guard unit at Toledo, Ohio reported that flames were seen shooting from one of the engines on this aircraft which was transporting military personnel. Three days later a mechanic who serviced this aircraft in Tacoma, Washington refused to sign the maintenance log because he thought the plane was unsafe. And then in November this same aircraft was involved in a tail-bumping incident at Grand Rapids, Michigan.

Under the force of subpoena issued by the subcommittee, the mechanic, mentioned above, and a former Arrow Air pilot related a number of incidents to the subcommittee which would certainly cast a shadow not only on the maintenance and safety record of Arrow but also on the provisions of DOT Order 8000.4E. These incidents will be discussed further in the next section. The Defense Department never knew of these incidents. This appears to be a direct violation of this order.

This subcommittee found that in none of these instances were the safety concerns uncovered during inspections conveyed to the DOD. While DOD is expected to rely on FAA for this type of information, FAA has failed to comply with the regulation. Even in the case of the NATI inspection, which was an enormous FAA undertaking, the results were never given to the Defense Department.

The lack of communication may even be seen within the Defense Department. From March 7, 1984 to April 5, 1984 Arrow was suspended from contracting with the MTMC for 30 days due to malfunctions of an engine thrust reverser causing a two-hour delay. MTMC also suspended Arrow for 90 days from October 23, 1984 through January 20, 1985, followed by a 120-day probation due to a continuation of delays and violations of standards of service. MAC was totally unaware of both these actions taken by the MTMC and consequently continued to use Arrow during the periods this airline was suspended by MTMC.

Subcommittee Motion on Arrow Air

The hearings disclosed that one of the most serious deficiencies in the DOD aircraft charter operation was the lack of an administrative enforcement mechanism. There is no approved authority within DOD with responsibility to accept, examine and rule on safety-related issues when they are discovered. The subcommittee was appalled that after the Gander crash no action was taken by anyone in DOD to determine immediately whether this air carrier's contract should be suspended. Indeed, in February 1986 the company was awarded a $7.8 million contract to transfer Navy personnel and supplies between Clark Air Force Base and Diego Garcia. This failure of the DOD to take action contrasts sharply with the reaction of the Administration, the media, Congress, and the public in general over the loss of seven lives in the space shuttle Challenger disaster.

Even if the FAA and DOD were adhering to provisions of FAA Order 8000.4E and the MAC and MTMC communicated effectively, there is still needed a panel or other organizational structure which could mediate disputes and complaints and examine safety deficiencies and accidents in a timely manner.

On February 6, 1986 Representative Larry Hopkins made a motion that the Secretary of Defense be requested to suspend all contracts with Arrow Air pending the conclusion of the investigation of the December 12, 1985 crash at Gander, Newfoundland and the investigations of all alleged Arrow Air safety violations. By a roll call vote, the motion was approved in subcommittee by a vote of 8 to 0. This action was taken in part because of the Defense Department's award of a $7.8 million contract to Arrow to transport Navy personnel and supplies between the Philippines and Diego Garcia before the results of the crash had been determined.

Immediately after this action by the subcommittee, the Department of Defense suspended Arrow—not because of the Gander crash or the earlier problems, but because it had used inappropriate spare parts in its maintenance program.

Subsequently, the Defense Department made the decision to allow Arrow to fulfill the remainder of the contract by transporting cargo, not military personnel. No more military personnel movements would occur pending the outcome of the various investigations.

Arrow Air Tail Number 950

The Arrow Air DC-8 which crashed on December 12, 1985 had a recent history of safety-related incidents, the subcommittee learned during its hearings. While the subcommittee did not take testimony on the facts of the Gander crash or in any way intend for its investigation to interfere with the Canadian investigation of that incident, an inquiry into Arrow Air and that particular tail number was undertaken.

Arrow Air is a Miami, Florida based company which has been operating passenger and cargo charter service for DOD since 1981. At the time of the NATI inspection Arrow Air operated 22 aircraft, employed 519 personnel, and operated regularly scheduled service from Miami to Puerto Rico. The aircraft involved in the Gander crash was built in 1969 and had reportedly logged 50,000 flying hours for five different owners. Arrow's two DC-10 aircraft are maintained under contract to Air Florida. Maintenance of the remainder of the fleet is contracted to Batch-Air Inc., Miami, Florida.

Witnesses testified that at least since 1984 Arrow Air as a company had received several unfavorable ratings by FAA inspectors, and the particular aircraft involved in the Gander incident was involved in several incidents prior to the December 12 tragedy.

Between 1981 and 1985 Arrow was cited for 56 violations of FAA rules and paid $40,500 in fines. The 1984 NATI report ranked Arrow 132 out of 141 Part 121 airlines. Arrow was also singled out along with 42 other airlines for a Phase II follow-up inspection to NATI. Arrow was identified further as one of 16 airlines which needed to be more closely examined because of deferred maintenance, sloppy record-keeping, lack of FAA-required inspections, and because training manuals were not current. The company opted to undergo a corporate reorganization in 1984; thus FAA made the decision not to suspend the company.

The subcommittee investigations revealed the following incidents involving Arrow tail number 950.

On July 28, 1985 the aircraft aborted a takeoff at Toledo, Ohio because flames were seen spewing from the rear of the number three engine. This incident may have been due to a compressor stall. On board the plane were 250 Air National Guardsmen from Ohio, Kentucky, Michigan, and Wisconsin. The subcommittee found that neither the FAA nor DOD was apprised of this event.

On November 15, 1985 the tail of the same aircraft struck the runway on takeoff from Grand Rapids, Michigan. The pilot of that flight failed to note that all 126 military passengers were seated in the aft section, and he used improper passenger weights in computing weight and balance. The takeoff was aborted and damage to the tail skid occurred. This damage was not entered into the aircraft maintenance log, and the pilot failed to ascertain the extent of the damage prior to the subsequent takeoff. The FAA suspended this pilot in January 1986 only after the facts of this incident were revealed in the press after the Gander crash.

A contract aircraft mechanic who serviced this Arrow aircraft in July and August 1985 at McCord Air Force Base, Washington testified before the subcommittee that he refused to sign the maintenance log because of the poor condition of that particular aircraft. He said that during the routine servicing the number three engine required ten quarts of oil, and the oil was seen accumulated in the cell of the engine. He also found corrosive water leaking from the toilet system into the belly of the aircraft and insufficient cargo bulkhead, potentially allowing cargo to shift in the cargo bay while in flight. Even more alarming, the mechanic testified that there is no system in place to call these problems to the attention of the FAA or DOD. He testified that he has never seen an FAA inspector during his tenure as a mechanic for several different maintenance companies. He added that he personally would never have flown on that particular aircraft.

The Subcommittee also heard from a former Arrow Air pilot who stated that the quality of maintenance at Arrow was the worst he experienced in all his years of flying. Maintenance delays were part of the routine operation. He also stated that it was not uncommon for the crew to be on continuous duty in excess of 18 hours, which has an adverse impact on safety. Problems at Arrow became so acute that many pilots became concerned for the safety of their passengers as well as their own. Some took action by calling FAA anonymously. Pilots with these smaller or "non-scheduled" airlines are expected to carry airplanes that in larger operations would not fly until maintenance is performed.

On March 4, 1984 this pilot complained to an FAA inspector at Logan Airport in Boston, Massachusetts about the particular Arrow DC-8 he was piloting that day.

> Unsatisfactory ramp inspection. Recommended additional NATI emphasis as soon as practical. This ramp inspection was conducted at Logan Airport in Boston as a result of the specific unsolicited urgent request of Captain Michael Sanjenis, an Arrow DC-8 captain, who stopped this inspection on the ramp at Logan, and not only requested that I look at his DC-8 and fly on it with him, but pleaded, demanded, begged, and requested that the FAA "Please,

please hone in on Arrow to stop current company maintenance practices before an accident occurs."

He stated that it would be better off to "Shut down the company rather than to keep flying this aircraft." Captain Sanjenis' complaints about Arrow Air were primarily in three areas: One, chaotic and haphazard crew scheduling and operational control; two, excessive flight and crew duty hours as a result of an intermix of international and domestic flights; and three, most serious, a continuing company policy of not fixing maintenance items for prolonged periods, and pencil whipping (falsified recordkeeping) maintenance discrepancies throughout the system.

He stated that on most Arrow aircraft the first level of built-in safety redundancy in aircraft systems was for all practical purposes virtually eliminated due to the numerous open write-ups and very few things are fixed.

When Arrow found out the FAA had boarded this pilot's aircraft, based on his complaints, the pilot was removed from the flight and subsequently suspended by Arrow.

TABLE 2-11.—FATAL NONCOMBAT DOD PASSENGER FLIGHTS

Date	Service	Aircraft	Fatalities
Jan. 10, 1968	Navy	C-54	19
Aug. 4, 1969	do	C-47	16
Sept. 18, 1969	Air Force	C-47	5
Aug. 28, 1973	do	C-141	17
Dec. 11, 1973	Navy	C-118	10
Mar. 20, 1975	Air Force	C-141	8
Apr. 4, 1975	do	C-5	155
Aug. 28, 1976	do	C-141	27
Do	do	C-141	19
Sept. 26, 1976	do	KC-135	13
Oct. 6, 1978	Navy	C-118	16
Nov. 12, 1980	Air Force	C-141	13
Mar. 19, 1982	do	KC-135	31
Apr. 30, 1983	Navy	C-131	14
July 12, 1984	Air Force	C-141	9
Total			372

TABLE 2-3.—ACCIDENTS AND FATALITIES

(Part 121 Carriers)

Calendar year	Scheduled service				Nonscheduled service			
	Accidents		Fatalities		Accidents		Fatalities	
	Number	Rate [1]	Number	Rate [1]	Number	Rate [1]	Number	Rate [1]
1978	21	0.348	160	2.65	2	0.99	0	0
1979	24	.358	351	5.24	6	3.62	3	1.81
1980	15	.221	0	0	4	1.48	1	.37
1981	25	.380	4	.06	1	.42	0	0
1982	15	.233	233	3.62	5	1.91	1	.38
1983	21	.316	15	.23	5	1.78	3	1.07
1984	13	.177	4	.05	3	.94	0	0

[1] Per 100,000 aircraft flight-hours.

LIST OF PART 121 AIRLINES ACCORDING TO THE RATE OF SEVERITY LEVEL 3 ADVERSE COMMENTS

Airline	Number of inspections	Percentage of unsatisfactory inspections	Rate of severity level 3 comments	Had military contract
Arista International	14	57.1	164.3	No.
Southern Flyer, Inc	6	83.3	133.3	No.
Air National	9	33.3	122.2	No.
Rich International [1]	26	50.0	119.2	Yes.
Galaxy	6	50.0	116.7	No.
United Air Carriers [1]	18	50.0	83.3	Yes.
Conner Airlines	9	33.3	77.8	No.
Brennan & Hargreaves	8	37.5	75.0	No.
Arrow Airways [1]	73	41.1	69.9	Yes.
South Pacific Island Airways [1]	19	21.1	63.2	Yes.
Cam Air	43	44.2	62.8	No.
Air North	22	40.9	59.1	No.
Jet Charter [1]	20	30.0	45.0	Yes.
Pan American [1]	184	19.6	43.5	Yes.
Southern Air Transport	28	21.4	42.9	No.
Tower Air	10	30.0	40.0	No.
Pacific East Air, Inc	15	13.3	40.0	No.
Viking International Airlines	33	30.3	39.4	No.
Northeastern International	46	34.8	39.1	No.
Horizon Air	18	22.2	38.9	No.
Air Pac, Inc	19	26.3	36.8	No.
People Express Airlines	129	24.0	35.7	No.
Eagle Aviation, Inc	17	29.4	35.3	No.
Capitol International Airways [1]	37	24.3	35.1	Yes.
Newair, Inc	73	23.3	32.9	No.
Markair	28	25.0	32.1	No.
Aloha Airlines	22	13.6	31.8	No.
Key Airlines [1]	13	15.4	30.8	Yes.
Buffalo Airways	10	30.0	30.0	No.
Emerald Air	71	22.5	29.6	No.
Air Florida, Inc	42	21.4	28.6	No.
Caribbean Air Services	7	28.6	28.6	No.
Rosenbalm Aviation	30	16.7	26.7	No.
Flying Tiger Line [1]	114	15.8	26.3	Yes.
Aspen Airways	23	13.0	26.1	No.
Transamerica Airlines [1]	62	16.1	25.8	Yes.
Jet America	35	22.9	25.7	No.
World Airways [1]	34	17.6	23.5	Yes.
Air North, Inc	70	12.9	22.9	No.
Excellair, Inc	22	18.2	22.7	No.
Combs Freightair/Front Co	58	24.1	22.4	No.
Air Resorts [1]	18	55.6	22.2	Yes.
Continental Airlines	271	16.2	21.8	No.
Bo-S-Aire	23	13.0	21.7	No.
Eastern Airlines [1]	384	14.8	21.4	Yes.
Marco Island Airways	19	15.8	21.1	No.
Provincetown-Boston	157	15.9	21.0	No.
Bar Harbor	81	14.8	21.0	No.
Air California	43	11.6	20.9	No.
Summit Airways	39	15.4	20.5	No.
Rio Airways	144	14.6	20.1	No.
T-Bird Air	5	40.0	20.0	No.
Hawaiian Airlines [1]	36	19.4	19.4	Yes.
International Air Service	48	14.6	18.8	No.
Florida West Airlines	11	13.6	18.2	No.
Alaska Airlines	66	12.1	18.2	No.
American Trans Air [1]	35	8.6	17.1	Yes.
Evergreen International [1]	79	10.1	16.5	Yes.

LIST OF PART 121 AIRLINES ACCORDING TO THE RATE OF SEVERITY LEVEL 3 ADVERSE COMMENTS—Continued

Airline	Number of inspections	Percentage of unsatisfactory inspections	Rate of severity level 3 comments	Had military contract
Wright	87	11.5	14.9	No.
Reeve Aleutian Airways [1]	7	14.3	14.3	Yes.
Freedom Airlines	35	14.3	14.3	No.
Pacific Southwest	50	6.0	14.0	No.
United Airlines [1]	384	9.6	13.5	Yes.
Frontier Airlines, Inc	113	8.8	13.3	No.
Delta Airlines	433	10.9	13.2	No.
Wings West	31	9.7	12.9	No.
Airlift International	16	12.5	12.5	Yes.
USAir, Inc	336	8.6	12.5	No.
Best Airlines	24	12.5	12.5	No.
Sea Airmotive, Inc	33	6.1	12.1	No.
Air One	51	7.8	11.8	No.
Ransome Airlines	112	9.8	11.6	No.
Southwest Airlines Co	113	9.7	11.5	No.
Lincoln	26	15.4	11.5	No.
Atlantic Southeast	44	6.8	11.4	No.
Chaparral Airlines	89	9.0	11.2	No.
Trans-Central Airlines	81	8.6	11.1	No.
Imperial Airlines	28	10.7	10.7	No.
Providence	10	30.0	10.0	No.
Air Virginia, Inc	91	11.0	9.9	No.
Muse Air Corp	41	4.9	9.8	No.
Western	113	15.9	9.7	No.
Midway Airlines	52	7.7	9.6	No.
Atlantic Gulf Airlines	32	15.6	9.4	No.
Coastal Airlines, Inc	11	9.1	9.1	No.
Air Atlanta, Inc	33	6.1	9.1	No.
Royale Airlines, Inc	221	6.8	9.0	No.
Britt Airlines	213	9.4	8.9	No.
Northwest Airlines, Inc. [1]	238	5.9	8.4	No.
Simmons Airlines, Inc	83	10.8	8.4	No.
Jet Fleet Corp	12	8.3	8.3	No.
DHL Cargo-Air Polynesia	25	8.0	8.0	No.
Frontier Horizon	25	8.0	8.0	No.
America West	51	7.8	7.8	No.
Braniff, Inc	184	6.0	7.6	No.
Air Illinois	14	7.1	7.1	No.
Gulf Air Transport	15	6.7	6.7	No.
Fisher Brothers Aviation	31	6.5	6.5	No.
Piedmont	170	7.1	6.5	No.
SMB Stage Lines	47	4.3	6.4	No.
Republic Airlines	315	3.8	6.3	No.
Ocean Air	33	6.1	6.1	No.
Surburban Airlines	98	7.1	6.1	No.
Pennsylvania Airlines	98	6.1	6.1	No.
Pilgrim	88	6.8	5.7	No.
Wien Air Alaska	36	11.1	5.6	No.
Sunworld Intl Airways	21	14.3	4.8	No.
American Airlines, Inc	450	4.0	4.7	No.
Metro Airlines	171	5.8	4.7	No.
Trans World Airlines, Inc. [1]	283	4.2	4.6	Yes.
Cascade Airways, Inc	44	4.5	4.5	No.
American International Air, Inc	50	12.0	4.0	No.
Rocky Mountain Airlines	27	3.7	3.7	No.
Puerto Rico International Airlines	83	3.6	3.6	No.
Federal Express	112	1.8	3.6	No.

LIST OF PART 121 AIRLINES ACCORDING TO THE RATE OF SEVERITY LEVEL 3 ADVERSE COMMENTS—Continued

Airline	Number of inspections	Percentage of unsatisfactory inspections	Rate of severity level 3 comments	Had military contract
New York Air	88	18.2	3.4	No.
Interstate Airlines	31	3.2	3.2	No.
Orion	64	6.3	3.1	No.
Zantop International Airlines	66	4.5	3.0	No.
Ryan Aviation Corp	43	2.4	2.4	No.
Ozark Airlines	158	1.3	1.3	No.
Sun Country	13	7.7	0	No.
Florida Express	28	3.6	0	No.
Challenge Air Transfer	13	0	0	No.
Air Wisconsin	60	1.7	0	No.
Basler Flight Service	1	0	0	No.
Pacific Alaska Airlines	17	0	0	No.
Bangor International	5	0	0	No.
Sierra Pacific Airlines	7	0	0	No.
Blue Bell	7	14.3	0	No.
Trans Air Link	11	0	0	No.
Airborne Express, Inc	78	0	0	No.
Jet East	12	0	0	No.
Pacific Air Express	19	0	0	No.
Trans Florida Airline	11	0	0	No.
All Star	10	0	0	No.
Northern Air Cargo	8	0	0	No.
Mid Pacific Island	20	0	0	No.
Great American Airways	14	0	0	No.
General Aviation, Inc	10	0	0	No.
ERA Helicopters	27	0	0	No.

[1] Airlines with military contracts.

Source: FAA, *Memorandum on Evaluation of National Air Transportation Inspection Program Inspection Reports*, April 1985.